

CLAIMS

1. (Currently Amended) A coating made of a film formed on the basis of at least one polymer material that includes at least one property-changing component embedded in a matrix of the polymer material, the film comprising several layer-like areas, at least one of the layer-like areas includes the property-changing component, and a concentration of the property-changing component embedded in one of the layer-like areas varies in a direction of a thickness of one of the layer-like areas, wherein the coating is disposed on a workpiece.
- 2-4. (Canceled)
5. (Previously Presented) The coating in Claim 1, wherein individual layer-like areas are arranged next to one another following surface contours of a basic material, wherein an interface between each two different layer-like areas runs crosswise to the surface contours of the basic material.
6. (Withdrawn) A coating, comprising a synthetic film formed on the basis of at least one polymer material and an additive embedded in a matrix of the polymer material, wherein the additive contains magnetizable particles.
7. (Withdrawn) The coating in Claim 6, wherein the additive contains chromium dioxide as magnetizable particles.
8. (Withdrawn) The coating in Claim 6 wherein the additive contains property-changing components.
9. (Withdrawn) The coating in Claims 6 wherein the film is composed of several layer-like areas.

10. (Withdrawn) The coating in Claim 9, wherein individual layer-like areas are different in terms of the embedded additive and/or the polymer material used.
11. (Withdrawn) The coating in Claim 10, wherein a concentration of embedded additive varies within the individual layer-like areas.
12. (Withdrawn) The coating of Claim 6, further comprising a surface including layer areas lying in different planes.
13. (Withdrawn) The coating in Claim 12, wherein layer areas include upper layers and lower layers and wherein at least portions of lower layers are exposed by stripping upper layers or covering lower layers when applying upper layers.
14. (Withdrawn) The coating of Claim 6, further comprising a surface which is structured.
15. (Withdrawn) A process for producing a coating, in which at least one polymer material, plus at least one property-changing component, is applied to a surface of a basic material to be coated and is crosslinked by then adding energy, wherein the polymer material is applied forming layer-like areas depending on the property-changing component mixed in.
16. (Withdrawn) The process in Claim 15, wherein the polymer material is blended with the property-changing component in one step and is applied to the surface to be coated.
17. (Withdrawn) The process in Claim 15, wherein the property-changing component is added to the polymer material before it is applied to the surface to be coated.
18. (Withdrawn) The process in Claim 15, wherein the polymer material is applied in liquid form.

19. (Withdrawn) The process in Claim 15, wherein a combination of different polymer materials is used as the matrix material.
20. (Withdrawn) The process in Claim 15, wherein the crosslinking is done using an electrostatic field.
21. (Withdrawn) The process in Claim 15, wherein the crosslinking is done using wavelength-specific radiation.
22. (Withdrawn) The process in Claim 15, wherein the layer-like areas are made with different layer thicknesses.
23. (Withdrawn) A process for producing a coating, in which a polymer material is applied to a surface being coated and is then polymerized by effect of energy, wherein an additive containing magnetizable particles is mixed into the polymer material to create a synthetic film that can be magnetized, at least in areas.
24. (Withdrawn) The process in Claim 23, wherein the polymer material and the additive are applied in powder form.
25. (Withdrawn) The process in Claim 23 wherein the polymer material is applied in liquid form.
26. (Withdrawn) The process in Claim 15 wherein by predetermining the layer thickness desired and knowing an amount to be applied and a time, the exact amount to be applied can be controlled with a path-time controller to achieve the predetermined layer thickness.

27. (Withdrawn) The process in Claim 26 wherein the thickness of the layers is measured without contact.
28. (Withdrawn) The process in Claim 27, wherein the measurement of layer thickness is done using ultrasound.
29. (Withdrawn) The process in Claim 23 wherein the coating is done in such a way that no crosslinking takes place and wherein if a mistake is made, the layer applied is removed and the workpiece is recoated.
30. (Withdrawn) The process in Claim 15 wherein upper layers are stripped away to expose lower layers.
31. (Withdrawn) The process in Claim 15 wherein the surface is structured.
32. (Withdrawn) The process in Claim 31, wherein the structuring is done before crosslinking, in any case before final solidification during polymerization.
33. (Withdrawn) A device for producing a coating with an arrangement applying a polymer material to a surface being coated, wherein a feed device is provided which mixes property-changing components with the polymer material.
34. (Withdrawn) The device in Claim 33, wherein the feed device mixes the property-changing components with the polymer material synchronously with said applying the polymer material to the surface being coated.
35. (Withdrawn) The device in Claim 33, wherein the feed device mixes the property-changing components with the polymer material before the polymer material is applied to the surface being coated.

36. (Withdrawn) The device in Claim 33, wherein a control device is provided that has a measurement device and detects a type and amount of feed of property-changing components and gives off a signal corresponding to the type and/or the amount, and that compares this signal with a predetermined reference variable and if the signal and the reference variable are the same ends the feed.
37. (Withdrawn) The device in Claim 33, wherein a feed device is provided which mixes the polymer material with an additive containing magnetizable particles.
38. (Withdrawn) The device in Claim 33, wherein a magnetizing device is provided which selectively magnetizes magnetizable particles embedded in a matrix of the polymer material.
39. (Withdrawn) The device in Claim 33, further comprising a control system for path-time control.
40. (Withdrawn) The device in Claim 33, further comprising a device for measuring thickness without contact.
41. (Withdrawn) The device in Claim 40, wherein the device for measuring thickness without contact is an ultrasound thickness measurement device.
42. (Withdrawn) The device in Claim 33, further comprising a unit for blowing off a coating that is applied.
43. (Withdrawn) The device in Claim 33, further comprising a unit for stripping off upper layers and exposing lower layers.

44. (Withdrawn) The device in Claim 33, further comprising a unit for structuring a surface of the coating.
45. (New) The coating of Claim 1, wherein the workpiece is suitable for application in the food and pharmaceutical industries, environmental protection, connection and drive technology, shipping, fluid energy systems, or the chemical and automobile industries.